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Technical Memorandum

ANALYSIS OF THE ECONOMICS OF REHABILITATING THE UNITED SHOE MACHINERY BUILDING

Prepared for

THE BOSTON LANDMARKS COMMISSION

October 1980

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MEMORANDUM

This memorandum analyzes the economics of investing in a rehabilitation of the United Shoe Building at 140 Federal Street in downtown Boston. In the memorandum we review the appraisal performed by C. W. Whittier and Brothers and analyze the impact of the income tax incentives for the preservation of historic buildings contained in the Tax Reform Act of 1976.

The memorandum is organized into the following sections:

I. Introduction

II. Analysis of the C. W. Whittier Appraisal

III. Measures of Economic Performance of an Income-Producing Building

IV. Review of the Economic Incentives for Preservation of Historic Structures

  1. Rapid Write-Off of Rehabilitation Costs
  2. Investment Tax Credit Plus Accelerated Depreciation

V. Economic Effect of Preserving the United Shoe Machinery Building

VI. Conclusions

I. INTRODUCTION

The United Shoe Machinery Building is a 24-story Art Deco-style skyscraper at 140 Federal Street at the edge of Boston's financial district near South Station. Originally the home of a leading manufacturer of equipment used in the mass production of footwear, it is a steel frame structure built in 1930 with concrete fireproofing on the interior and brick masonry on the exterior. It contains about 312,000 square feet of gross floor area.

Adjoining the building is a six-story structure (136 Federal Street) which depends on its skyscraper neighbor for egress and utilities. The USM building currently affords 285,000 square feet of rentable office space, of which, according to latest appraisals, 22 to 38 percent has been vacant over the last five years. At 136 Federal Street, which contains some 47,000 square feet of rentable space, about two-thirds of the space is vacant.

The USM Building currently houses retail activities on the fully occupied ground floor, including travel agencies, a bank, a restaurant, and specialty stores. Office tenants consist of service firms and a few transportation oriented businesses, including the executive offices of the Massachusetts Bay Transportation Authority.

Title to the building stands in the name of Thomas M. Horan and Herbert W. Vaughan as trustees of the 140 Federal Street Trust. The beneficiary of the trust is Diamond Bay N.V., a Netherlands Antilles corporation, whose stock is fully owned by the Kuwaiti corporation United Realty Company through a second Netherlands Antilles corporation, Padgett Investment N.V. The fact of foreign ownership has special implications for the tax impact of owning and selling income-producing real property, like the USM Building; these points will be discussed below.

A number of related issues confronts the Landmarks Commission in its decision to declare the building a landmark under Chapter 772 of the 1975 Acts of the Commonwealth of Massachusetts. First, is the building of sufficient historical and architectural significance to merit its preservation at the expense of other development possibilities on the site? What is the nature of other development possibilities and how would they contribute to or detract from the existing land uses surrounding the USM site? Second, how seriously has the building deteriorated and what are the likely rehabilitation costs? Finally, it is feasible or profitable to rehabilitate the USM Building?

This memorandum will be concerned primarily with the third of these questions; the first two questions are beyond its scope.

II. ANALYSIS OF THE C. W. WHITTIER APPRAISAL

On the question of the comparative economics of rehabilitation versus demolition and new construction, an appraisal done by Mr. Charles Kenny of C. W. Whittier and Brothers concluded that the site with its potential for a new office building is approximately twice as valuable as the USM Building. More specifically, Whittier and Brothers concluded that the value of a new building in terms of its stream of income potential (first year's net cash estimate equals $725,000) is $6,000,000, while an optimistic "current status" value of the existing building assuming a nearly full occupancy level and a capital cost equal to an average year's capital investment spread out over a ten-year amortization period (first year's net cash estimate: $462,000) is $3,850,000. (Both these values are based on a 12 percent capitalization rate applied to the first year's net cash figure, which is the income remaining after operating expenses, real estate taxes, and debt service are paid.)

The difference in value between the income streams of the new building and old building becomes much more pronounced if the cost of major improvements is figured into the analysis. Under three assumed improvement levels ($20, $40, and $60 per square foot), the Whittier appraisal estimates a first-year net cash flow gain of $13,000 with the $20 improvement option and respective first-year net losses of $441,000 and $553,000 with the $40 and $60 improvement options.

Essential to the results of the Whittier appraisal are its assumptions, outlined here and summarized in Table 1:

- Substantially higher gross rental income for a new building than for a rehabilitated building.

  The Whittier appraisal assumes an average rent level of $20.52 per square foot in a 524,000-square-foot new building (total gross income $10.7 million), versus an average rent range of $11.38 to $15.82 per square foot in a 332,000-square-foot rehabed building (total gross income $3.6 to $5.1 million). These rent totals also assume $207,000 annual revenues from a basement parking facility and a 2 percent vacancy rate in the new building, while the rehab options assume no parking revenues and 3-5 percent vacancy.

- Financing terms that are more favorable for the new building than the rehab.
  The Whittier appraisal assumes a 12-percent interest rate for both the new and rehab options but substantially different amortization periods between the two options. A forty-year payback period is assumed for the new building, and ten and

Table 1

COMPARATIVE LISTING OF ASSUMPTIONS IN C.W. WHITTIER'S APPRAISAL OF U.S.M. BUILDING

	New Building	Renovated Building[1/]		
		$20	$40	$60
Size (Square Feet)	524,000	332,000	332,000	332,000
Rents				
Per Square Foot	$20.52	$11.38	$12.65	$15.82
Total	$10.9 mill.	$3.8 mill.	$4.2 mill.	$5.3 mill.
Vacancy Allowance	2%	5%	4%	3%
Financing Terms				
Interest Rate	12%	12%	12%	12%
Amortization Period	40 yrs.	10 yrs.	10 yrs., 20 yrs.[2/]	10 yrs., 20 yrs.[3/]
Total Loan Amount	$56.2 mill.	$6.6 mill.	$13.3 mill.	$19.9 mill.
Annual Debt Service	$6.8 mill.	$1.1 mill.	$2.0 mill.	$2.9 mill.
Real Estate Taxes				
Per Square Foot	$3.00	$3.03	$3.40	$4.30
% of Gross Rents	14%	28%	28%	28%
Total Liability for One Year	$1.57 mill.	$1.01 mill.	$1.13 mill.	$1.43 mill.
Operating Expenses				
Per Square Foot	$3.13	$4.29	$3.98	$3.98
Total Expenses	$1.64 mill.	$1.43 mill.	$1.32 mill.	$1.32 mill.
NET CASH AFTER EXPENSES AND DEBT SERVICE	$724,555	$13,114	$(440,968)	$(552,463)

1/ The $20, $40 and $60 listings refer to improvements undertaken, shown as improvements of $20, $40 and $60 per square foot.

2/ Whittier broke the financing down into two parts: $6.6 million at 12% for 10 years, and the remaining $6.7 million at 12% for 20 years.

3/ Whittier broke the financing down into two parts: $6.6 million at 12% for 10 years, and $13.3 million at 12% for 20 years.

Source: C.W. Whittier and Brothers, 136 & 140 Federal Street, Boston, Massachusetts: Appraisal and Economic Analysis as of May 1980, and Economics Research Associates.

twenty-year amortization periods for the rehab options. These assumptions imply annual constants of .1211 for the new building and .1722 and .1322 for the rehab options. If the rehab options enjoyed the financing terms accorded the new-construction option, the $1.14 million annual debt service payment on the $20 improvement option would be about $804,500 (almost $340,000 less), the $2.0 million annual debt service payment on the $40 improvement option would sink to $1.5 million (more than $400,000 less), and the $2.9 million annual debt service payment on the $60 improvement option would be $2.4 million (almost $500,000 less). These calculations show the critical role the financing assumption plays, as the choice of one assumption or the other can make the project feasible or infeasible.

- Real estate taxes that are less per square foot for the new building than for the rehab options.
  The Whittier appraisal assumes a $3-per-square-foot tax level for the new building and per-square-foot tax levels of $3.03, $3.40, and $4.30, respectively, for the $20, $40, and $60 improvement options. The new building's tax liability was calculated on the basis of $3 per square foot, while for the rehab options the per-square-foot tax liability levels were the result of (1) calculating taxes for the $20 option on the basis of a 287.90 mill tax rate applied to the existing $3.5 million assessed valuation of the building, (2) finding that that calculation yielded a tax liability figure of 28 percent of gross rental income, and (3) applying the 28 percent ratio to the gross rents under the $40 and $60 options to determine those tax liabilities. If the rehab options' tax liability levels had been calculated at the $3-per-square-foot basis used for the new building, taxes would have been $11,000 less than the $1.0 million under the $20 improvement option, $133,000 less than the $1.13 million under the $40 improvement option, and $431,000 less than the $1.43 million under the $60 improvement option.

Clearly, the assumptions bear critically on the results. Having evaluated the Whittier appraisal and its assumptions, ERA has made the following observations:

1. An accurate assessment of the return of investing in any income-producing property should account not only for one year's cash return, but also for (1) the stream of benefits available over an assumed holding period of several years, (2) annual potential tax benefits of investing in the building, and (3) the potential profit to be earned from selling the building. Whittier's approach presents only one element of these benefits.

2. The Whittier appraisal does not consider the significant tax benefits available under the Tax Reform Act of 1976 and the Revenue Act of 1978 from investing in the rehabilitation of historic structures. As our analysis in Section V will demonstrate, these benefits are significant enough to make the rehab option more attractive than was presented in the Whittier analysis.

3. The Whittier assumption of rent differentials between the rehab and new options is probably valid. A new building will likely command somewhat higher rents than rehab space. Nevertheless, the differential may be overstated. Given the tight office market in Boston, and given the well-established market position in Boston of rehabed office space, the differential between the new option and $60 improvement option may indeed be smaller than portrayed in the Whittier appraisal.

4. The Whittier assumptions about financing terms are particularly critical in bringing about results in favor of the new construction option. The large differential which the appraisal assumes to hold between financing for rehabilitation and new Construction does not necessarily exist. ERA learned from discussions with several commercial mortgage officers in Boston that terms are only slightly different between substantial rehab and new construction projects. Both would start with 30- or 35-year amortization periods and at least a 13-percent interest rate; the greatest interest rate differential likely to exist between the two types of projects, according to the lenders, would amount to one-half of one percentage point.

   In addition, a critical recent development in long-term financing today cannot be ignored: the end of the period of the fixed-rate mortgage. According to the results of the above-mentioned discussions with lenders, a mortgage lending institution would require its own equity participation in the development -- thus drawing off some portion of the project's benefits -- and would demand renegotiation of the mortgage terms after five years or less. The uncertainty surrounding long-term financing could jeopardize the feasibility of both the rehab and new construction options for the USM site.

5. The operating expense assumptions appear reasonable. The operating expenses for the new building were based on comparable developments, and those for the rehab option on the past history of the building's operation.

6. The real estate tax liability levels for the new and rehab projects appear to be derived inconsistently; the Whittier appraisal may have overestimated taxes due under the rehabilitation option. The new building's taxes due were based on a $3-per-square-foot rule of thumb that exists for other similar buildings in Boston's financial district. That appears to be a valid assumption based on information ERA has obtained from the Boston Redevelopment Authority; yet, the taxes due for the rehab options are based on a method of calculating taxes that yields higher liabilities -- 28 percent of gross income. If that method were used for the new building option, the total taxes due would be double what the Whittier appraisal has estimated them to be, $3.01 million instead of $1.57 million. That would cause a net annual loss after debt service rather than the positive amount shown of $725,000.

Overall, the Whittier appraisal appears to be based on assumptions that place the new-construction alternative in a more favorable light than the rehab alternative, particularly through its dependence on a single year's before-tax cash returns and its omission of the tax benefits of investment in historic preservation. In the remainder of this memorandum, we will describe other measures of economic return which we believe to more accurately reflect the value of a project than does a single year's return (Section III); discuss the tax benefits of historic preservation (Section IV); and present an estimate of the returns possible from investing $20, $40, and $60 per square foot in rehabilitating the USM Building, based on an eight-year holding period followed by a sale of the property (Section V). Our conclusions are stated in Section VI.

III. MEASURES OF ECONOMIC PERFORMANCE OF AN INCOME-PRODUCING BUILDING

In analyzing the benefits of owning and developing real estate of any kind, three types of return need to be considered: annual cash flow, tax savings, and potential gain from future sale of the property based on both its appreciation in value and the reduction of loan balance over time. These components can be described more completely as follows:

1. Annual cash flow: This is the spendable cash left over from gross rents after operating expenses, real estate taxes, and debt service have been paid. Before-tax cash flow refers to this cash as it exists before relevant income taxes have been paid, and after-tax cash flow adds to the before-tax cash flow the positive or negative tax impact deriving from each year's ownership of the property.

2. Tax savings: Substantial tax savings are available from ownership of income-producing property. This is especially true, as will be described below, in the case of historically designated property that has been rehabilitated under the new incentives available under the Tax Reform Act of 1976, or in the case of properties at least 20 years old that have been rehabilitated under the tax credit provisions of the Revenue Act of 1978. These savings result primarily from the deductions allowed under federal income tax laws for the depreciation expenses that apply to a building. To take advantage of these savings, however, an investor must have sufficient income from other sources to meet these savings potentials.

3. Gain from future sale: One of the primary benefits of owning property is the substantial gains available to the owner from selling it. The value of a given sale by an owner of a property at some point in time after he or she bought the property reflects both its increase or decrease in market value and the degree to which the mortgage on the property has been paid off, or amortized.

In order to fully evaluate a real estate investment, an analysis of the potential value of a property must consider all three of these sources of value. In analyzing the value of the USM Building, therefore, ERA has calculated the "internal rate of return" (IRR) for each investment alternative applicable to the building. The IRR compares the present value of the flow of cash, tax, and sales benefits accruing to property owner over the holding period to the initial equity investment required. Expressed as a percentage, it reflects in a single number the worth of the investment in question in terms of all three sources of return. The IRR is most useful in comparing alternative investment options; in the following analysis, it will be used to compare the respective worth of different levels of rehabilitation investment in the USM Building and the different tax incentive programs available.

IV. REVIEW OF THE ECONOMIC INCENTIVES FOR PRESERVATION OF HISTORIC STRUCTURES

Two tax incentives exist to encourage the preservation and rehabilitation of the nation's older buildings: (1) provisions for the rapid write-off of the costs of rehabilitating a certified historic structure through a rapid amortization of the rehabilitation costs over a five-year period; and (2) a rehabilitation investment tax credit equal to 10 percent of rehabilitation costs, accompanied by an accelerated depreciation schedule. While the rapid amortization program and the accelerated depreciation component of the second incentive require formal historic designation of the property being renovated, the tax credit

by itself does not. It does, however, apply only to buildings in use for at least 20 years, and it imposes certain conditions on the nature of the renovation, which will be described below.

The rapid write-off and accelerated depreciation programs are currently set to expire in the summer of 1981, and legislation is pending in both the Senate and the House to extend them until 1986. Observers in Washington indicate Congress is likely to extend the programs for at least one year while a nation-wide analysis of the program's impact is conducted by the U.S. Department of Commerce.1/

1. Rapid Write-Off of Rehabilitation Costs

   The Tax Reform Act of 1976 (Public Law 94-455) and the 1978 amendments to that act amended the Federal Income Tax Code to stimulate the preservation of historic, commercial and income-producing buildings by means of tax incentives for rehabilitating historic structures and tax disincentives for demolishing them. The incentive provisions allow an investor who preserves a building designated as historic by the Secretary of the Interior to amortize the costs of a certified rehabilitation over five years. This dramatically shifts tax deductions closer to the present than was previously true in the case of renovating old buildings, thereby providing a higher return on investment in the early years of the project.

   Two important disadvantages attend the program, however. First, beginning in the sixth year, after the tax rehabilitation expenses are fully amortized, the investor is subject to significant tax liability, the exact extent depending on the project's yearly cash flow. Second, upon sale of the property tax the investor is confronted with significant tax liability, amounting to full income tax liability on the portion of sale proceeds equal to the amount of tax write-offs in excess of the deductions that would have resulted if straight-line depreciation had applied, plus the more favorable capital gains tax liability on the remainder of the proceeds. Therefore, the benefit of postponed tax liability under the rapid amortization program is offset by high annual tax liability beginning in the sixth year and higher tax liability upon sale of the property than would be true without the incentive program. The Tax Reform Act also provides a disincentive against demolishing a structure designated as historic and building a new one in

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1/ Based on conversations in September 1980 with staff members of the Heritage Conservation and Recreation Service of the U.S. Department of the Interior, which administers the historic preservation tax incentive programs.

its place. Prior to the Act, a building owner could deduct from his or her taxable income both the demolition costs and the remaining undepreciated basis of the building as business expenses. Under the Act, the costs of demolishing an historic structure cannot be deducted from tax liability; rather, they are added to the value of the land and can therefore offer no tax benefit until sale of the property, when they should help reduce capital gains taxes. The Act imposes a further penalty on demolition by permitting owners of new structures built on sites of demolished historic structures to depreciate the new properties on the basis only of straight-line rather than accelerated depreciation. This penalty applies only to sites or structures that have been certified as historic prior to demolition.

2. Investment Tax Credit Plus Accelerated Depreciation

   If the developer declines the rapid amortization incentive, he or she may alternatively select the rehabilitation investment tax credit program in combination with an accelerated depreciation schedule. Under Section 315 of the Revenue Act of 1978, improvements to an income-producing building that has been in use for at least 20 years qualify for a tax credit equal to 10 percent of the cost of the improvements. This provision thereby amends the existing investment tax credit law so as to encourage investment in older buildings as well as other types of property owned for commercial purposes, such as production machinery and transportation equipment used in the manufacturing process. In order to qualify, the rehabilitation expenditure must apply toward an improvement that constitutes a "major portion" of the building, according to criteria based on volume, floor space, and functional differences between rehabilitated and unrehabilitated sections of the building. (Under the last mentioned criteria mixed-use buildings are treated as if they were separate buildings; improvements to a building used half as office and half as retail, for example, would qualify if they constituted a rehabilitation of a "major portion" of either the office component or the retail component.) To qualify for the full 10 percent tax credit, the improvements must have a useful life of seven years or more; they qualify for two-thirds of the credit if they have a five or six year useful life. The improvements do not qualify if their purpose is to enlarge the building (although an increase in floor space resulting from interior remodeling does qualify), or if more than 25 percent of the existing external walls of the building are replaced.

   The tax credit option does not require historic designation; it may be used, however, in combination with the 150-percent-of

straight-line depreciation schedule, which does require historic designation. The 150-percent depreciation provision was created, like the five-year amortization program, by the Tax Reform Act of 1976. It also enhances the attractiveness of the rehabilitation by shifting tax deductions to the earlier years, but much less extensively. While the five-year write-off virtually guarantees the investor a highly positive return on investment in the early years through significant tax shelter, the accelerated depreciation program only increases the chances of a positive return. Whether a positive return is actually achieved depends on the specific circumstances of the property's cash flow.

Whether rapid amortization or the tax credit/accelerated depreciation option presents the more attractive investment depends on the economics of the contemplated rehabilitation and the taxable income of the investor. In the analysis of the United Shoe Machinery Building in the following section, ERA compares the returns available from the two tax incentive choices. This analysis is followed by an examination of the returns from investing in the building if the historic tax incentive legislation is not extended by Congress.

V. ECONOMIC EFFECT OF PRESERVING THE UNITED SHOE MACHINERY BUILDING

In this section, ERA presents projections of the alternative returns possible from the historic preservation tax incentives to a developer choosing among three levels of rehabilitation investment for the USM Building. Because there is uncertainty about the continued existence of the historic preservation tax incentives, we also present findings as to the returns available from investing in the building in the absence of the incentives.

In each case a holding period of eight years after the renovations, followed by a sale of the building, is assumed. This approach allows the analysis to take into account all the benefits of real estate ownership and development that accrue over time: cash flow, tax benefits, and gain from sale.

For the purpose of comparing the possible returns from the rehabilitation options with the return estimates shown in the Whittier appraisal, ERA selected the same rehabilitation expenditure levels that were analyzed in that appraisal -- $20, $40, and $60 per square foot. It is beyond the scope of this evaluation to assess the accuracy of these improvement cost estimates or their relevance to the needs of the USM Building. Nevertheless, the three levels are useful as rough representations of three rehabilitation alternatives -- superficial improve-

ments, selective major improvements, and extensive renovation. For purposes of comparing the USM Building with other rehabilitations around the country, we have included as Appendix A to this report a portion of another study which we conducted for the City of St. Louis, in which other office building rehabilitations around the country are discussed.

The assumptions behind these return projections bear critically on the results. Throughout the analysis ERA has chosen assumptions based on two guidelines: the need to portray a conservative picture of returns, and the need for a projection of returns that is directly comparable to the Whittier analysis. Therefore, the assumptions generally reflect a high estimate of expenses and a low estimate of income, and match, as closely as possible, the assumptions used in the Whittier appraisal. These assumptions are identical for each of the three investment levels and consist of the following:

- Project costs consist of the \$20-, \$40-, and \$60-per-square-foot costs on an assumed building size of 332,177 rentable square feet. This square footage figure was used in the Whittier appraisal to calculate project costs.

- Financing consists throughout the analysis of 75 percent mortgages at a 13 percent interest rate for 20 years (annual constant = .1423). Selection of these terms was based on conversations with mortgage lenders in the Boston area. Equity participation, therefore, amounts to 25 percent of project costs. It is important here to reiterate a caution mentioned above: the analysis assumes a fixed-rate mortgage, while the project would probably be able to obtain only a variable-rate mortgage, under which the interest rate would be allowed to shift periodically to reflect the conditions of the money market. Financing expenses could be greater or less than those calculated in this analysis according to the direction and magnitude of those shifts.

- Project income derives solely from tenant rents that in turn are based on existing market conditions. The gross rental income figures chosen for the first year of the project's life derive from those projected in the Whittier appraisal to be obtainable under each level of rehabilitation investment. This amounts to average per-square-foot rents of \$11.38 under the \$20 rehabilitation investment, \$12.65 under the \$40 investment and \$15.82 under the \$60 investment.[1/]

[1/] These rent levels are based on Whittier's calculations of different rents likely to be obtained on each of the floors of the building.

- Operating expenses are assumed to start at a level of approximately 31.5 percent of gross rents and increase ten percent each year. The 31.5 percent figure was chosen because it is conservative, fits well into the history of actual operating expenses of the USM Building, and closely matches the Whittier appraisal. The ten-percent-per-year increase reflects current inflation rates.

- Real estate taxes are assumed at a rate of $3.25 per square foot. This tax rate is based on conversations with officials in the city's tax assessor's office and the Boston Redevelopment Authority.

- Depreciation schedules, when appropriate, assume a depreciable base equal to the cost of improvements plus Whittier's appraisal of $3,850,000, and an average useful life of the improvements of thirty-years.

- Income taxes are figured with the taxpayer assumed to be in the 50-percent tax bracket. This assumption holds both in the case of annual income tax liability and recapture tax of excess depreciation at time of sale.

- Other taxes include capital gains tax and minimum tax on tax-preference items. The former amounts to 28 percent of the capital gain at the time of sale, and the latter consists of 15 percent of excess depreciation less a $50,000 deduction, as provided for in the Tax Reform Act of 1969 and amended by the Revenue Act of 1978.

- Sales price is based in each case on a capitalization rate of 11 percent applied to net operating income.

Using these assumptions ERA conducted discounted cash flow analyses of each of the three rehabilitation investment alternatives as they are affected by both the rapid amortization and tax credit/accelerated depreciation programs, and as they are affected by the tax credit alone (that is, assuming withdrawal of the historic preservation tax incentives). These analyses were conducted with the knowledge that the current market for office space in downtown Boston is very strong. According to a recent survey, by the end of 1981 there will be an office space shortfall of more than one million square feet in Boston.

Given the above-listed assumptions and the strong office market conditions, three important conclusions are apparent from the cash flow analyses:

1. Primarily because of the tax benefits available from the historic preservation incentive programs, worthwhile positive return is available through an investment in a rehabilitation of the USM Building. If the tax incentive programs are withdrawn, profitability is lowered to levels that are less likely to attract investors.

2. The higher the rehabilitation costs, the lower the returns, since debt service payments escalate rapidly with increasing loan amount. A rehabilitation on the order of $20 per square foot would provide greater financial returns than the $40 and $60 investments, primarily because of the large differences in debt service costs. ERA believes, however, that a $20-per-square-foot investment would not sufficiently improve the building's marketability to bring about increased rents and lower vacancy rates. The $20-per-square-foot option is therefore likely to be infeasible.

3. Of the two historic rehabilitation tax incentive options available to a developer of the USM Building -- the rapid amortization and the 10 percent tax credit/accelerated depreciation options -- the former provides the higher return for an investor group with sufficient income to take full advantage of the tax shelter available. A word of caution, however is important: the rapid amortization option requires high tax payments beginning in the sixth year and high recapture taxes at time of the building's sale.

The pages that follow will present the interpretation of the cash flow analysis that gave rise to these conclusions. Table 2 presents the results in summary form, while Tables 3-1 through 3-3 and 4-1 through 4-3, respectively, present the details of the annual before and after-tax cash flows and calculations of net profits or losses from future sale of the property.

As mentioned in Section 1 above, the USM property is owned by the Kuwaiti firm United Realty Company. Under Section 871 of the Internal Revenue Code, a nonresident alien may choose from two methods of taxation. First, he may elect to treat income from real estate holdings as "income which is effectively connected with the conduct of a trade or business within the United States,"[1] allowing him to deduct "business" expenses (operating expenses, property taxes, and interest payments) from his taxable income, and otherwise taxing his income under rules that apply to citizens and residents of the United States. Or, he may choose to treat his income as not connected with business conducted

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[1] From Section 871(d) of the Internal Revenue Code.

Table 2

UNITED SHOE MACHINERY BUILDING: SUMMARY OF RESULTS

Investment Level ($/s.f.)	Project Cost	Equity Investment	Tax Program	After-Tax Cash Flow ($1000s)[1]			Net Gain From Sale After Taxes in Year 8 ($1000s)	Internal Rate of Return
				Year 1	Year 2	Year 6		
$20	$6,643,540	$1,660,885	With Historic Incentives					
			Rapid Amortization	$ 948	$ 958	$ 336	$5,113	58.0%
			10 Percent Tax Credit and Accelerated Depreciation	1,210	542	541	7,133	53.0%
			Without Historic Incentives					
			10 Percent Tax Credit	1,123	468	511	6,591	49.8%
$40	$13,287,080	$3,321,770	With Historic Incentives					
			Rapid Amortization	1,351	1,345	(12)	(633)	28.9%
			10 Percent Tax Credit and Accelerated Depreciation	1,782	435	321	4,293	22.5%
			Without Historic Incentives					
			10 Percent Tax Credit	1,638	303	274	5,120	20.8%
$60	$19,930,620	$4,982,655	With Historic Incentives					
			Rapid Amortization	1,965	1,957	(90)	(2,479)	22.1%
			10 Percent Tax Credit and Accelerated Depreciation	2,560	529	370	5,274	17.9%
			Without Historic Incentives					
			10 Percent Tax Credit	2,298	296	242	8,310	15.6%

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[1] Years 1, 2, and 6 were selected for this table to reflect the cash flows in summary form. Under rapid amoritzation, after-tax cash flow ATCF drops drastically after the fifth year. Under the tax credit program, the primary tax benefit -- the credit -- is taken in the first year; the cash flow drops significantly in Year 2 and then remains constant or drops gradually in the following years.

Source: Economics Research Associates.

Table 3-1

BEFORE- AND AFTER-TAX CASH FLOWS:
$20-PER-SQUARE-FOOT REHABILITATION INVESTMENT[1]

Tax Program	Measure Of Return	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8[2]
Rapid Amortization	Before-Tax Cash Flow ($1000's)	$629	$656	$684	$714	$748	$784	$824	$869
	Return on Equity (%)	37.9%	39.5%	41.2%	43.0%	45.0%	47.2%	49.6%	52.3%
	After-Tax Cash Flow ($1000's)	$948	$958	$967	$977	$989	$336	$362	$5,475
	Return on Equity (%)	57.1%	57.7%	58.2%	58.8%	59.5%	20.2%	21.0%	330.0%
Tax Credit Plus Accelerated Depreciation	Before-Tax Cash Flow ($1000's)	$629	$656	$684	$714	$748	$784	$824	$869
	Return on Equity (%)	37.9%	39.5%	41.2%	43.0%	45.0%	47.2%	49.6%	52.3%
	After-Tax Cash Flow ($1000's)	$1,210	$542	$540	$538	$538	$541	$541	$7,678
	Return on Equity (%)	72.8%	32.6%	32.5%	32.4%	32.4%	32.5%	32.5%	462.2%
Tax Credit Only (No Historic Preservation Tax Incentives)	Before-Tax Cash Flow ($1000's)	$629	$656	$684	$714	$748	$784	$824	$869
	Return on Equity (%)	37.9%	39.5%	41.2%	43.0%	45.0%	47.2%	49.6%	52.3%
	After-Tax Cash Flow ($1000's)	$1123	$468	$478	$488	$499	$511	$523	$8100
	Return on Equity (%)	67.6%	28.2%	28.8%	29.4%	30.0%	30.8%	31.5%	487.7%

1/ Assumptions as listed in text.

2/ Eighth-year figures include cash flow and sale proceeds in that year. See Table 4-1 for calculation of sale proceeds.

Source: Economics Research Associates.

Table 3-2

BEFORE- AND AFTER-TAX CASH FLOWS: $40-PER-SQUARE-FOOT REHABILITATION INVESTMENT[1/]

Tax Program	Measure Of Return	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Rapid Amortization	Before-Tax Cash Flow ($1000's)	$169	$174	$181	$187	$195	$203	$213	$223
	Return on Equity (%)	5.1%	5.2%	5.4%	5.6%	5.9%	6.1%	6.4%	6.7%
	After-Tax Cash Flow ($1000's)	$1,351	$1,346	$1,341	$1,333	$1,325	$(12)	$(21)	$(667)
	Return on Equity (%)	40.7%	40.5%	40.4%	40.1%	39.9%	(0.4%)	(0.6%)	(20.1%)
Tax Credit Plus Accelerated Depreciation	Before-Tax Cash Flow ($1000's)	$169	$174	$181	$187	$195	$203	$213	$223
	Return on Equity (%)	5.1%	5.2%	5.4%	5.6%	5.9%	6.1%	6.4%	6.7%
	After-Tax Cash Flow ($1000's)	$1,782	$435	$400	$373	$347	$321	$295	$4,560
	Return on Equity (%)	53.6%	13.1%	12.0%	11.2%	10.4%	9.6%	8.9%	137.3%
Tax Credit Only (No Historic Preservation Tax Incentives)	Before-Tax Cash Flow ($1000's)	$169	$174	$181	$187	$195	$203	$213	$223
	Return on Equity (%)	5.1%	5.2%	5.4%	5.6%	5.9%	6.1%	6.4%	6.7%
	After-Tax Cash Flow ($1000's)	$1638	$303	$298	$290	$283	$274	$264	$5372
	Return on Equity (%)	49.3%	9.1%	9.0%	8.7%	8.5%	8.2%	7.9%	161.7%

1/ Assumptions as listed in text.

2/ Eighth-year figures include cash flow and sale proceeds in that year. See Table 4-1 for calculations of sale proceeds.

Source: Economics Research Associates.

Table 3-3

BEFORE- AND AFTER-TAX CASH FLOWS:
$60-PER-SQUARE-FOOT REHABILITATION INVESTMENT[1]

	Measure Of Return	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8[2]
Rapid Amortization	Before-Tax Cash Flow ($1000's)	$130	$136	$140	$146	$152	$159	$166	$173
	Return on Equity (%)	2.6%	2.7%	2.8%	2.9%	3.1%	3.2%	3.3%	3.5%
	After-Tax Cash Flow ($1000's)	$1,966	$1,957	$1,945	$1,933	$1,918	$(90)	$(109)	$(2,610)
	Return on Equity (%)	39.4%	39.3%	39.0%	38.8%	38.5%	(1.8%)	(2.2%)	(52.4%)
Tax Credit Plus Accelerated Depreciation	Before-Tax Cash Flow ($1000's)	$130	$136	$140	$146	$152	$159	$166	$173
	Return on Equity (%)	2.6%	2.7%	2.8%	2.9%	3.1%	3.2%	3.3%	3.5%
	After-Tax Cash Flow ($1000's)	$2,560	$529	$489	$450	$410	$370	$328	$5,559
	Return on Equity (%)	51.4%	10.6%	9.8%	9.0%	8.2%	7.4%	6.6%	111.6%
Tax Credit Only (No Historic Preservation Tax Incentives)	Before Tax Cash Flow ($1000's)	$130	$136	$140	$146	$152	$159	$166	$173
	Return on Equity (%)	2.6%	2.7%	2.8%	2.9%	3.1%	3.2%	3.3%	3.5%
	After Tax Cash Flow ($1000's)	$2298	$296	$284	$272	$258	$242	$223	$6793
	Return on Equity (%)	46.1%	5.9%	5.7%	5.5%	5.2%	4.9%	4.5%	136.3%

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[1] Assumptions as listed in text.

[2] Eighth-year figures include cash flow and sale proceeds in that year. See Table 4-1 for calculation of sale proceeds.

Source: Economics Research Associates.

Table 4-1

CALCULATION OF NET PROFIT (LOSS) FROM SALE: $20-PER-SQUARE-FOOT REHABILITATION INVESTMENT

(All Figures in $1000's)

	Historic Preservation Incentives		No Historic Preservation Incentives
	Rapid Amortization	Tax Credit Plus Accelerated Depreciation	Tax Credit Only
EXCESS DEPRECIATION			
Accumulated Depreciation	$ 6,644	$ 3,536	$ 2,800
- Straight Line	-2,798	-2,798	-2,800
Excess Depreciation	$ 3,846	$ 738	0
CAPITAL GAINS			
Gross Sales Price	$14,345	$14,345	$14,345
- Commission and Closing Costs (7%)	-1,004	-1,004	-1,004
Net Sales Price	13,341	13,341	13,341
- Net Book Value	-3,850	-6,958	-7,694
Gain on Sale	9,491	6,383	5,497
- Excess Depreciation	-3,846	- 738	- 0
Capital Gain	$ 5,645	$ 5,645	$ 5,497
TAXES DUE ON SALE			
Capital Gains Tax (28% of Capital Gain)	$ 1,581	$ 1,581	$ 1,581
+ Preference Tax	+ 527	+ 61	+ 0
+ Recapture Tax	+1,923	+ 369	+ 0
Total Tax Liability	$ 4,031	$ 2,011	$ 1,581
PROFIT (LOSS) ON SALE			
Net Sales Price	$13,341	$13,341	$13,341
- Taxes	-4,031	-2,011	-1,581
- Mortgage Balance	-4,197	-4,197	-4,197
Net Cash From Sale	$ 5,113	$ 7,133	$ 7,563

Source: Economics Research Associates.

Table 4-2

CALCULATION OF NET PROFIT (LOSS) FROM SALE: $40-PER-SQUARE-FOOT REHABILITATION INVESTMENT

(All Figures in $1000's)

	HISTORIC PRESERVATION INCENTIVES		No Historic Preservation Incentives
	Rapid Amortization	Tax Credit Plus Accelerated Depreciation	Tax Credit Only
EXCESS DEPRECIATION			
Accumulated Depreciation	$13,287	$ 5,801	$ 4,570
- Straight Line	-4,570	-4,570	-4,570
Excess Depreciation	$ 8,717	$ 1,231	0
CAPITAL GAINS			
Gross Sales Price	$14,927	$14,927	$14,927
- Commission and Closing Costs (7%)	-1,045	- 1,045	-1,045
Net Sales Price	13,882	13,882	13,882
- Net Book Value	-3,850	-11,336	-12,567
Gain on Sale	10,032	2,845	1,315
- Excess Depreciation	-8,717	- 1,231	- 0
Capital Gain	$ 1,315	$ 1,614	$ 1,315
TAXES DUE ON SALE			
Capital Gains Tax (28% of Capital Gain)	$ 368	$ 452	$ 368
+ Preference Tax	+1,308	+ 135	+ 0
+ Recapture Tax	+4,359	+ 616	+ 0
Total Tax Liability	$ 6,035	$ 1,203	$ 368
PROFIT (LOSS) ON SALE			
Net Sales Price	$13,882	$13,882	$13,882
- Taxes	-6,035	-1,203	- 368
- Mortgage Balance	-8,387	-8,387	-8,394
Net Cash From Sale	$(540)	$ 4,292	$ 5,120

Source: Economics Research Associates.

Table 4-3

CALCULATION OF NET PROFIT (LOSS) FROM SALE:
$60-PER-SQUARE-FOOT REHABILITATION INVESTMENT
(All Figures in $1000's)

	Historic Preservation Incentives		No Historic Preservation Incentives
	Rapid Amortization	Tax Credit Plus Accelerated Depreciation	Tax Credit Only
EXCESS DEPRECIATION			
Accumulated Depreciation	$19,930	$ 8,003	$ 5,312
- Straight Line	-6,341	-6,341	-5,312
Excess Depreciation	$13,589	$ 1,662	0
CAPITAL GAINS			
Gross Sales Price	$20,927	$20,927	$20,927
- Commission and Closing Costs (7%)	- 1,465	- 1,465	-1,465
Net Sales Price	19,462	19,462	19,462
- Net Book Value	- 3,850	-15,777	-18,469
Gain on Sale	15,612	3,685	993
- Excess Depreciation	-13,589	- 1,662	- 0
Capital Gain	$ 2,023	$ 2,023	$ 993
TAXES DUE ON SALE			
Capital Gains Tax (28% of Capital Gain)	$ 566	$ 566	$ 278
+ Preference Tax	+1,988	+ 199	+ 0
+ Recapture Tax	+6,795	+ 831	+ 0
Total Tax Liability	$ 9,349	$ 1,596	$ 278
PROFIT (LOSS) ON SALE			
Net Sales Price	$19,462	$19,462	$19,462
- Taxes	- 9,349	- 1,596	- 278
- Mortgage Balance	-12,592	-12,592	-12,592
Net Cash From Sale	$(2,479)	$ 5,274	$ 6,592

Source: Economics Research Associates.

in the United States, and be taxed at a flat rate of 30% of income from rents or sales proceeds.[1] (The 30% rate applies to all countries with which the United States does not have a lower rate agreed upon by special treaty. No such treaty is in effect between the United States and Kuwait, so the 30% rate applies.) Since the foreign owner/investor of the USM property would have to elect to the former alternative in order to enjoy the tax benefits available under historic revitalization, the following discussion assumes the USM owners would elect that tax alternative over the 30% rate. An elaboration of the three conclusions listed above follows.

Conclusion One: Profitability

It is clear that the tax savings available from the historic rehabilitation incentives offer an investor an attractive return on investment through highly beneficial tax shelter. Depending on the investment level and tax program chosen, the internal rate of return potentially available from the project falls between 18 and 58 percent, based on annual cash flow returns that vary widely according to the level of investment and tax program chosen (see Tables 2 and 3-1 through 3-3). Of these returns, 90 percent or more consist of tax benefits, since (except in the case of the $20-per-square-foot improvement) the annual cash flow (after payment of expenses, property taxes, and debt service) generally provides returns of five percent or less (see Tables 3-2 and 3-3). Before-tax cash flow return from the $20 improvement is high -- between 38 and 52 percent return on equity -- but, as will be discussed more fully under Conclusion Two below, there is reason to doubt that such a small level of rehabilitation investment would improve the building enough to make it marketable at the higher rents suggested in the Whittier appraisal, or to improve the 20- to 40-percent vacancy situation.

ERA also considered the attractiveness of the investment without the historic tax incentives. As Table 2 shows, the withdrawal of the historic preservation tax incentives does reduce the return on investment. The removal of these incentives still, however, allows the investor to enjoy the benefit of the 10% tax credit, which simply applies to the rehabilitation of 20-year-old and older buildings rather than being specifically linked to historic designation. Nevertheless, the lower internal rates of return for the $40 and $60 levels of investment, the only two likely to be feasible with or without the incentives (see

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[1] This interpretation of tax laws comes from conversations with Larry Zinamon, IRS tax analyst, from readings of IRS publication "U.S. Tax Guide for Aliens" (publication no. 519), and from readings of the Internal Revenue Code.

discussion under Conclusion Two), do make the rehabilitation project less attractive to an investor. In recognition of the high risk involved with such a renovation project, the investor would probably require an internal rate of return in the low 20s at least. The incentives, therefore, do add importantly to the investment's attractiveness; their elimination would significantly detract from the appeal of the investment.

A question may be raised as to why the elimination of the tax incentives does not reduce the value of the internal rate of return measures by more than a few percentage points. The main explanation is the high level of income tax liability incurred at the time of sale by the seller of the building. This liability is primarily the result of the increased recapture tax and preference tax liability because of the excess depreciation that results from the rapid amortization and, to a lesser extent, from the accelerated depreciation. Table 4-2, for example, shows that total taxes due on sale under the two historic preservation alternatives are $6,035,000 and $1,203,000, respectively, while they drop to $368,000 if the historic preservation incentives are dropped. This reduced tax liability improves the net gain on sale by nearly $6,000,000 over the rapid amortization alternative and by nearly $1,000,000 over the tax credit/accelerated depreciation alternative. The same pattern exists for the $20 and $60 investment levels.

The tax benefits of historic preservation do have some disadvantages, in the form of (1) dramatically increased annual tax liability upon the discontinuance of the benefits, and (2) increased recapture tax liability upon sale of the property. Tables 3-1 through 3-3 show the dramatic drop under the rapid amortization program in annual after-tax return from the fifth to the sixth and ensuring years--from $989,000 to $336,000 for the $20 improvement option, from $1,325,000 to a loss of $12,000 for the $40 improvement option, and from $1,918,000 to a loss of $90,000 for the $60 option. Tables 4-1 through 4-3 show the high level of taxes due on sale under both the historic preservation programs--for all three levels of investment, taxes due at sale are significantly higher under the incentive programs (particularly the rapid amorization program) than without them.

Nevertheless, in all cases analyzed, the substantial increases in tax savings in the early years far outweigh the increased tax liabilities they require later. As a result, as shown in Table 2, the internal rates of return are substantially higher under the incentive programs than without them. These returns demonstrate the greater value of earnings early in the life of a project over earnings later--the key to the incentive of the rapid amortization program.

Conclusion Two: Choice of Level of Investment

Tables 2 and 3-1 through 3-3 demonstrate the superior profitability of the $20-per-square-foot rehabilitation investment over the $40 and $60 investments. The $20 investment, amounting to total project costs of about $6.65 million, yields after-tax equity returns of between 55 and 60 percent per year for five years under rapid amortization and returns of 73 percent in the first year and a little more than 32 percent in the following years under the tax credit/accelerated depreciation program. The internal rates of return for the $20 option are about 58 and 53 percent for each of the two tax programs. For the investment levels the returns are much smaller: about two-thirds as high under rapid amortization, and about one-third as high under tax credit/accelerated depreciation. The internal rates of return range between 18 and 29 percent for these investment levels.

There are also striking differences in before-tax returns between the $20 case, on the one hand, and the $40 and $60 cases, on the other. The rental income of the $20 option is sufficient to generate before-tax returns of between 38 and 52 percent, while the $40 and $60 options can only generate before-tax returns of less than 10 percent.

These large differences reflect the impact of debt service payments on the respective cash flows. Under the $20 improvement case, annual debt service amounts to $709,000, while under the other two cases, debt service amounts to $1.4 million and $2.1 million per year, respectively.

An important caution applies to these results, however. Improvements of only $20 per square foot may be so superficial as to fail to increase the quality of office space in the building. If that is the case, the building may remain at its below-market rent levels and 22- to 38-percent vacancy rates, making the assumptions of increased rents and decreased vacancy rates invalid. Unless it can improve the building sufficiently to attract more tenants and command higher rents, the $20 option may well be infeasible.

Conclusion Three: Choice of Tax Incentive Program

As mentioned previously, the historic preservation tax incentives are based on shifting the tax savings to the early years of the project's life so that worthwhile returns can be realized by investors in rehabilitation. In general, whether greater returns are available from the five-year amortization or the combined 10 percent tax credit and 150 percent accelerated depreciation program depends somewhat on how extensive the tax deduction shifts offered by either program are, and, more importantly, on whether the investor's income is high enough to allow

him or her to take full advantage of the tax shelter. A very-high-income investor would benefit most from the program offering the most shelter--the rapid amortization program. Investors with somewhat lower incomes, on the other hand, would probably benefit more from the tax credit/accelerated depreciation program, though they may have to spread the tax credit over a few years, rather than take it all in the first year.

In the foregoing analysis, ERA has assumed the investor or investor group has a very high income needing shelter. This assumption is not unrealistic since the tax shelter on an investment as large as that which would be involved in the USM Building would likely be sold to a group of investors rather than one, and it is the group's aggregate income which determines the amount which can be sheltered. Under this assumption, the rapid amortization program provides higher returns for all investment levels than does the tax credit/accelerated depreciation option. Between four and five percentage points separate the internal rates of return for the two programs: 58 and 53 percent for the $20 option, 28 and 23 percent for the $40 option, and 22 and 18 percent for the $60 option. In each case the rapid amortization program yields the greater return.

The greater return of the rapid amortization program derives from the huge tax deductions available in the first five years. The value of these deductions are even sufficient to overcome the cost of the high recapture tax liabilities (described above under Conclusion One) that result when the property is sold. In the $40 and $60 options these taxes outweigh the sale proceeds to cause an actual loss from the sale in the case of the rapid amortization program, while net gains from sale of $4.3 million and $5.3 million are registered under the tax credit/accelerated depreciation option; nevertheless, the large first-through fifth-year tax deductions under rapid amortization generate superior overall returns.

Concerning the benefits of these tax incentive programs, however, two important cautions must be noted. First, as mentioned above, in order to take advantage of these tax benefits, the investor or investor group must have sufficient income to be sheltered. If the investor or investor group's income isn't high enough to take full advantage of the tax shelter under the five-year write-off, the tax credit/accelerated depreciation option would be the more advantageous option.

Second, as has been described previously in this memorandum, the investor benefitting from the rapid amortization program must be ready to face the substantial tax liability that applies in the beginning of the sixth year once the improvements have been fully amortized. If the investor retains the building for a long time after the fifth year, these yearly tax liabilities will increase; however, the investor will

be in an increasingly better position as time goes on to sell the building. This is true because excess depreciation decreases over time as the difference between accelerated and straight-line depreciation write-offs diminishes, and this in turn gradually reduces recapture taxes. This situation suggests that the investor should pay close attention, as time goes on, to the trade-off between the increasing annual tax liability and the decreasing recapture tax liability. His or her decision about when to sell will hinge on the outcome of this trade-off.

VI. CONCLUSIONS

In summary, there is a potential for significant returns, mainly in the form of tax savings utilizing the historic preservation tax incentives, to an investment of rehabilitation for the United Shoe Machinery Building. When the stream of benefits is calculated over several years in a manner that accounts for the tax benefits available under these incentives, returns on investment become evident in the range of 18 to 28 percent, depending on the level of rehabilitation investment and type of tax program selected. (The 53- to 58-percent returns under the $20-per-square-foot investment option are here omitted, because of our judgement that such a low level of rehabilitation investment will fail to attract higher rents or increase occupancy significantly, thereby making the option infeasible.) In general, the five-year amortization of rehabilitation expenses provides a return greater than the 10 percent tax credit/accelerated depreciation, but does require a very high income on the part of the investor or group of investors. Furthermore, it subjects the investor to significant tax liability in the sixth year, after full amortization of rehabilitation expenses, and to recapture tax liability at the time of sale. The magnitude of the recapture tax liability depends on when the sale takes place: the earlier the sale, the greater the recapture tax.

The level of investment chosen dramatically affects the return on investment that results. The analysis presented in this memorandum has shown the $20-per-square-foot rehabilitation investment to provide a far greater return than the $40- or $60-per-square-foot options, but only if such a low-level investment can provide significant enough improvements to encourage new tenants at Class-A or near-Class-A rents. Any decision regarding level of improvement should be made only after it has been specifically determined that income from reasonably expected rents can cover the debt service payments required after operating expenses and property taxes have been paid.

In closing, a cautionary note is appropriate. The estimates of financial feasibility contained in both this analysis and the C.W. Whittier appraisal hinge directly on the assumptions made about potential

rental income levels, financing terms, operating expenses, and real estate taxation. ERA's analysis demonstrates the potential returns available from investing in the United Shoe Machinery Building, but offers no firm guarantees. The analysis is based on assumptions that present what ERA believes to be a realistic and conservative picture of the benefits of the project. These assumptions can well serve as approximations of the conditions required to generate the results shown. If actual conditions are significantly different from these assumptions, financial returns will, accordingly, be different.

APPENDIX

APPENDIX A

EXAMPLES OF OTHER OFFICE BUILDING REHABILITATIONS AROUND THE COUNTRY

(taken from Economics Research Associates' study, _Economic Impact of the Multiple Resource nomination to the National Register of Historic Places on the St. Louis Central Business District_, March 1980)

PART 4

SECTION II

REUSE EXPERIENCE IN OTHER CITIES

The experience with adaptive use in other cities has been similar to that in St. Louis. Many of the buildings that have been adaptively reused have been industrial loft buildings in older warehouse type districts, or have been other special-use type buildings such as schools or train stations. The reuse experience with office buildings has been much more limited (see Table 39). Typically office buildings have been recycled into office buildings or other closely related uses.

1. Office Building Conversion and Rehabilitation

Examples of this type of reuse or substantial rehabilitation are indicated by reference to such projects as the Omaha Building in Omaha, Nebraska; the Wendell Phillips Building in Boston; the Wyandotte Building in Columbus, Ohio; the Marquette Building in Chicago; the Cuyahoga Building in Cleveland; and the Alamo National Bank in San Antonio. All of these buildings were recycled into office space (with the exception of the Wendell Phillips Building, which was recycled into housing). A number of these buildings were redeveloped utilizing tax incentives, while others were redeveloped in the context of conventional financing approaches. The following section describes the experience with these reuse projects.

Alamo National Bank--The 23-story Alamo National Bank tower in downtown San Antonio was kept in continuous bank and office use during its 1975 renovation. The 1930 building features Art Deco design with earth tone brick masonry decorated with terra cotta and bronze. The interior is highlighted with travertine floors, marble wainscoting, solid brass and bronze fittings and a grand lobby which soars to forty feet. During the renovation a special staircase was built surrounding a three-story center well which is enclosed by a glass and bronze handrail. A Tiffany-like lighted ceiling consisting of five-foot-square bronze coffers containing a grid of bronze light diffusers was also added.

Renovation began in January of 1975 and was completed fourteen months later in February, 1976. The first eight floors which are used for banking activities and encompass 35,000 of the building's 225,000 square feet of space, were completely rehabilitated. The banking activities located in this space at the time of renovation were temporarily moved into a vacant structure across the street. Immediately upon completion of the rehabilitation, these banking functions moved back into their former space. The remainder of the building was subject to less extensive renovation. Improvements throughout the building in-

Table 39

SELECTED OFFICE BUILDING REUSE PROJECTS

Project Name and Location	Year of Conversion	Gross Building Area (Sq. Ft.)	Redevelopment Cost Per Sq. Ft.	Annual Rental Rates Per Sq. Ft.[/1]	Comments
Marquette Building (Chicago, Illinois)	1979-1980	340,000	$21.00	office: $12-$13 retail: $40-$60	restoration for office & commercial use
Wyandotte Building (Columbus, Ohio)	1979	40,000	$64.00	$8.25-$12.00	rehabilitation for office use
Wendell Phillips Building (Boston, Massachusetts)	1974-1975	67,000	$39.50	N.A.	downtown office building to apartments and commercial space
Alamo National Bank (San Antonio, Texas)	1975-1976	225,000	$47.10 (for 85,000 s.f. extensively renovated	$0.60	renovation for continued office and bank use
Omaha Building (Omaha, Nebraska)	1978	250,000	$17.00	$10.50	vacant office building renovated for office use
Cuyahoga Building (Cleveland, Ohio)	1976	63,000	$35.40	office: $9.50 retail: $12.50	gut rehabilitation to office and retail uses

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N.A. Not available

/1 Figures in this column are in 1979 dollars.

Source: Economics Research Associates

cluded new hall ceilings and lighting, restroom facilities, carrier induction units and, where possible, interior zone systems. To conserve energy, snap-on aluminum frames were applied directly over the existing double sash wooden window frames. This cost approximately $270 per window (total cost of approximately $300,000), and allows the windows to be opened and cleaned from the inside.

The cost for the 85,000 suare feet which were completely renovated was approximately $3.2 million. This is equivalent to approximately $47 per square foot in 1979 dollars. The partial renovation of the remainder of the building cost approximately $1.8 million, for a total project cost of $5 million.

The office space not used by the bank rents for $8.64 per square foot and includes all utility costs. The building was fully occupied before renovation and is fully occupied at the present time. Rents are competitive with prevailing rents in the area. The National Bank of Commerce, built in approximately 1961 and also in the downtown, currently rents for $9.00 per square foot; while the 1974 First National Bank, also in the downtown, rents space for $10.44 per square foot. The building across the street which was used for interim housing of banking activities during the renovation has been demolished and ground breaking for a new office tower is scheduled for early in 1980. The new structure, which is being built by the Alamo National Bank, will rent for approximately $12.00 per square foot including utilities.

The renovation was financed directly by the Alamo National Bank. The building is neither a designated historic structure nor in an historic district, and the Tax Reform Act of 1976 was therefore not utilized.

Satisfied with their rehabilitation experience, the bank provided interim financing for one downtown reuse project last year, and is currently involved with interim financing of two more downtown reuse projects.

Cuyahoga Building--This eight-story, 1893 building in downtown Cleveland was designed by Daniel Burnham, one of the leading architects at the turn of the century, and was the first steel-frame structure in Cleveland. The Cuyahoga Building is faced with brown brick with a sandstone and terra cotta trim and contains a mix of neoclassical and Romanesque elements. One of the few remaining examples of the Chicago skyscraper school, the building is on the National Register of Historic Places. Due to vigorous lobbying, the building's owners have been able to resist what they perceive to be the unnecessary and cumbersome restrictions of city landmark designation.

The Veteran's Administration had occupied the Cuyahoga Building for many years under a lease with One Euclid Company, the building's owners.

In 1967, the VA relocated into a new Federal office complex in downtown Cleveland. Due to a slow early 1970's office market and high renovation costs, the building's office space remained vacant and unrehabilitated for approximately eight years. With the encouragement of the Broadview Management Company, which now owns 50 percent of the One Euclid Company, the Cuyahoga Building was renovated in 1976.

The business objective was to extend the building's useful and profitable life, and at the same time contribute to upgrading an area where the owners have other real estate investments. A "backward plan" was developed, which first determined the cash flow the renovated building could generate, and then decided the extent of renovation work this cash flow could support. This is somewhat different than the common procedure in which developers first determine the cost of renovation, and then decide whether the market can accept the rents required. The drawback of this conventional procedure is that if net revenues do not provide an adequate return on investment, then a new renovation plan must be developed. This entails not only the cost of a new design, but also a delay of at least several months.

The renovation included gutting of the entire interior except for the horizontal divisions, and new elevators, ceilings, drywall, plumbing and HVAC systems. Vinyl wall coverings and carpets were added throughout, and the lobby was restored to its original 1890's decor. A new steam/hot water heating and cooling system was installed which has lowered energy costs by 25 percent.

The exterior was cleaned by sandblasting, the masonry was repointed, and all the wood window frames were covered with baked-enamel, aluminum frames and operable sashes which matched the originals. One-eighth inch insulating glass was used in the windows.

The 63,000 square foot area was renovated at a cost of approximately $1.8 million. This includes an unexpected $300,000 expenditure to replace the plumbing system which was found to be inadequate during renovation. Renovation costs were financed with a $1.8 million mortgage payable over 15 years at a 10 percent interest rate. The Tax Reform Act of 1976 was not utilized because the owners determined they did not need the accelerated depreciation, and did not want to be bound by the restrictions involved in utilizing the Tax Reform Act provisions.

Upon completion of the renovation, the Engineering Department of the Standard Oil Company of Ohio (Sohio) moved into three of the five floors (2-6) for which it had contracted. Sohio did not move into the fifth and sixth floors until January 1978 and December 1979 respectively. Between the completion of construction in 1976 and actual occupancy of these floors, Sohio paid a warehousing fee to hold their option on the space. The seventh floor remained vacant until March,

1979, when it was leased by a law firm. The eighth floor is still vacant, though two parties are interested in the space. Richard Kortier, President of Broadview Management, expects the eighth floor to be occupied by July, 1980.

Mr. Kortier sees this slow absorption as being partially the result of an interior layout which makes the building suitable only for full floor tenants. The extra corridors and fire exits which double floor occupancy would require, would be both difficult to engineer and would cut down leasable space by about 15 percent.

The office space is currently renting for an average of $9.50 per square foot. The owners pay all taxes, operating expenses, and debt service for the building, but tenants pay a proportionate share of all increases in taxes and operating costs. The owners pay for heat, but tenants pay for electricity, which runs approximately $.60 per square foot. The tenants finished individual spaces to their own specifications. Mr. Kortier characterizes the building as "high Class B." The retail space on the ground floor was not renovated and was in continuous use throughout the rehabilitation of the office space. The retail space currently houses a bank and a bakery, and a newsstand will fill the presently vacant retail slot within the next few months. The rent for retail space is $12.56 per square foot (excluding utilities).

Marquette Building--The 17-story Marquette Building in Chicago's Loop, slated for demolition in 1975 when occupancy fell to 10 percent, is currently undergoing major renovation. The structure was designed by the internationally prominant architectural firm of Holabird and Roche. Now, almost a century later, the original designer's decendant firm, Holabird and Root, are undertaking its renovation.

The Marquette is an outstanding example of the Chicago school of skyscraper architecture which was first attracting international attention when the structure was built in 1894. The Marquette is listed on the National Register of Historic Places, and is a registered Chicago landmark.

The renovation, which includes extensive restoration, began in 1979 and will be completed in the Fall of 1980. Restorative techniques utilized range from replacement of exterior terra cotta units of which there are over fifty different designs, to marble and mosaic cleaning and repair.

The first and second floor lobbies had been "modernized" when automatic elevators were installed. This modernization included installation of a ceiling under decorative marble beams, and down lighting to replace what was originally largely natural lighting. This resulted in covering the marble beams, reducing the ceiling height by approximately two feet, highlighting the off-white terrazzo floor and concommitantly

hiding the J.A. Holzer mosaics in dim light. The drop ceiling and down lighting have been removed, revealing the original marble beams. The new lobby lighting spectrum will bring out colors in the mosaic which have not been seen since the natural light was cut off.

Exterior repair will include tuckpointing, terra cotta repair, window caulking, marble cleaning, and painting. The original twelve foot high cornice which hung out eight feet over the street which was removed about 20 years ago will be replaced with a simplified replica.

Though this restoration work is expensive, Walker Johnson, the Holabird and Root associate in charge of the project, estimates that it adds at least $3 per square foot to the rental rates.

Tenant spaces are divided into two categories, ground floor commercial and office space on the second through the seventeenth floors. There is potential space for nine shops and restaurants on the ground floor.

The office space is organized in a U-shaped plan with a light court and elevator lobby in the center. Floors average 19,500 square feet and are split into north and south zones. Each zone contains new restrooms, power and lighting transformers, tenant metering and telephones and a new HVAC system. Fanrooms, located on every third floor, feed the floors above and below the units. In addition, the core facility allows enough flexibility to accommodate special tenant requirements.

The total redevelopment cost will run to approximately $7 million, excluding tenant finishing. The structure is over 80 percent leasable (340,000 square feet gross building area, 275,000 square feet net), and all space has been committed since July 1979. About 20 percent of the structure is currently occupied, and the building will be 95 percent occupied by Fall of 1980. Office space rents for between $12 and $13 per square foot (full service). This compares to a prevailing office rent in new Chicago structures of between $16 and $17 per square foot.

The only major unforeseen difficulty in the renovation was a short supply of skilled craftsmen who could handle the specialized tasks involved in restoration (masons, marble and terra cotta repair people, roofers, etc.).

The Bankers Life and Casualty Company of Chicago, owners of the Marquette, are financing the construction. A final decision on utilization of the 5-year rapid amortization provision of the Tax Reform Act of 1976 has apparently not been made, but it is possible the owners will use this option. All renovation work has been done in accord with the Department of the Interior's Technical Services Division guidelines, and would therefore be qualified for the tax benefits provided by the Tax Reform Act.

Omaha Building--This elegant Italian Renaissance style McKim, Mead and White design was built in Omaha in 1888. It is an H-shaped masonry structure with flat twin towers, a profusion of arches, and horizontal bands of multicolored stone. The 11-story structure was vacated in 1970 when its owner, the Omaha National Bank, moved its headquarters across the street to the modern Woodman Tower. The old Italianate fortress stood vacant for several years. In 1974, the building was slated for demolition and replacement by a 28-story office complex.

In 1977, Omaha National signed a long term lease with an Omaha-based law firm. The 1978 renovation of the 250,000 square foot building cost approximately $4 million. The construction included enlivening the dreary rear courtyard with a glass-enclosed greenhouse atrium which fills most of four floors. The facade was cleaned, and the interior marble columns and woodwork were restored.

Ten of the building's 12 floors were committed to tenants before construction began. The law firm holding the lease committed to seven floors and another floor was preleased to an investment brokerage firm. Omaha National, the owners of the building, took the other two preleased floors. A savings and loan now occupies the ground floor, and the building has been fully occupied since May, 1979. Because of the thick walls and other architectural idiosyncrasies of the structure, only 170,000 of the building's 250,000 square foot area is leasable. Rents run on par with other first class Omaha office space at approximately $10.50 per square foot (full service).

The developers obtained interim financing from the Omaha National Bank, the owner and now partial lessee of the building. Though the Omaha Building is on the National Register, the Tax Reform Act's rapid depreciation provisions were not utilized. The developers are currently involved with the renovation of approximately 1 million square feet of space in a number of projects. Use of the rapid depreciation provisions in any of these projects would yield more depreciation than the developes can use. For the experience, however, the developers had the Omaha renovation officially qualified for Tax Reform Act eligibility by the Department of the Interior. The project is using conventional, straight line depreciation and the 10 percent rehabilitation tax credit.

Wyandotte Building--Designed by Chicago School architect Daniel Burnham, the 11-story Wyandotte Building was the first steel framed skyscraper in Columbus, Ohio. The 1898 structure is in a prime downtown location and is listed on the National Register of Historic Places.

Owned by the State of Ohio, the building had been vacant for several years since the completion of a new state office tower. Slated for demolition, the Wyandotte was purchased by the Klingbeil Company, an Ohio-based development corporation, for approximately $100,000.

The structure had suffered significant deterioration since it was vacated by the State, and substantial rehabilitation was required. The 1979 renovation included new heating, air conditioning, plumbing and restroom facilities. Sprinklers and a stair tower were added to meet fire code specifications. A new roof was built over the existing leaking roof. Though the original elevator cabs were retained, all of the other elevator equipment was replaced. New interior partitions and storm windows were also added. The exterior was repointed and cleaned by a chemical treatment (rather than the 20 percent less expensive sandblasting method) upon the recommendation of the local Historical Society. Many original architectural features such as woodwork and terra cotta, iron, marble and brass details were preserved. The 40,000 square foot building area was renovated for approximately $2.56 million, or $64 per square foot.

The building was 80 percent leased to the Ohio Hospital Association and its subsidiaries before construction was complete. The remaining 20 percent of the building's 33,000 square feet of leasable space is presently out for signature to the same tenants. Rent for the first two floors is approximately $12.00 per square foot, while rent for floors three through five is $9.25 per square foot, and rent for the sixth through eleventh floors is $8.25 per square foot. The tenants pay all utiliies (except water) and rents are subject to escalator clauses for management fees, taxes and maintenance.

The developers had considered demolition and construction of a new office tower on the site. It was expected that new office space would cost between $80 and $90 per square foot to build, and would command rents between $10 and $11 per square foot. This option was not exercised due to Tax Reform Act rehabilitation incentives and demolition disincentives, and the amount of time that would have been required before a new structure could be occupied.

The Wyandotte project was highly dependent on the rehabilitation tax incentives of the Tax Reform Act of 1976. The 5-year rapid amortization provision encouraged high tax bracket investors to join the project's limited partnership. The developers had little problem obtaining a $1.35 million construction loan because of the strength of the parent corporation, the building's prime location, and the healthy Columbus office market. The $2.56 million total redevelopment cost included an equity investment of $970,000. The Wyandotte's developers had hoped to utilize a 1977 City property tax abatement for historic structures. Due to political problems ensuing from school district financial troubles, however, the City withdrew this option.

The Klingbeil Company subsidiary directly responsible for the Wyandotte renovation was established specifically to capitalize on the Tax Reform Act rehabilitation incentives. They are currently directing the renovation of another historic structure, the 1909 Plaza Hotel, in Toledo. In Toledo, as in Columbus, however, the developers were promised a city property tax abatement which was ultimately denied. Due to

these experiences, and the high renovation costs they have encountered, the developers have shifted their focus away from extensive renovations of historic structures.

Wendell Phillips Building--The Wendell Phillips Building is a 12-story former office building in Boston's garment district. When the vacancy rate reached 60 percent, reuse as residential space was considered. City on-site parking requirements would have made conversion to residential use impossible. With parking requirements waived, however, the project was successfully developed. The potential parking problem was resolved through self-selection: no Wendell Phillips Building tenant owns a car.

Many elements of The Wendell Phillips Building's original office use were convenient for residential reuse. Elevator shafts were already in place and no new staircases were needed. The large office windows were also excellent for residential use, providing good ventilation and ample sunlight.

Although the exterior of the structure was virtually unchanged, major rehabilitation work was done on the interior. This included entirely new floor plans and mechanical systems.

The building's 66,900 square foot area is now apportioned into approximately 3,300 square feet of commercial space on the ground floor, 38,900 square feet of residential space and 24,700 square feet which is used for circulation, community use and other nonrentable uses. Total redevelopment cost in 1974-75 was $2,002,400, or $21,500 per unit. This translates into a $39.50 per square foot redevelopment cost in 1979 dollars.

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